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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2012 Navy	<b>DATE:</b> February 2011
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APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				PE 0204575N: <i>Elect Warfare Readiness Supt</i>							
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	34.267	39.398	18.142	-	18.142	19.985	19.894	16.476	15.920	Continuing	Continuing
2263: <i>Information Warfare System</i>	34.267	39.398	18.142	-	18.142	19.985	19.894	16.476	15.920	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

Research, assess, and develop information warfare capabilities.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>
Previous President's Budget	37.368	39.398	51.800	-	51.800
Current President's Budget	34.267	39.398	18.142	-	18.142
Total Adjustments	-3.101	-	-33.658	-	-33.658
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-2.032	-			
• SBIR/STTR Transfer	-0.968	-			
• Program Adjustments	-	-	-33.527	-	-33.527
• Section 219 Reprogramming	-0.100	-	-	-	-
• Rate/Misc Adjustments	-	-	-0.131	-	-0.131
• Congressional General Reductions	-0.001	-	-	-	-
Adjustments					

**Change Summary Explanation**

The reduction in FY 2012 from PB 2011 reflects the transfer of efforts and funds for Graywing and Medusa to PE 0304785N as well as a reduction in DOD Service Support Contractors. The realignment of funds reflects a change in focus to large/longer term acquisition efforts to fast paced agile acquisition efforts.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0204575N: Elect Warfare Readiness Supt				PROJECT 2263: Information Warfare System			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
2263: Information Warfare System	34.267	39.398	18.142	-	18.142	19.985	19.894	16.476	15.920	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification											
Information Operations (IO) Mission Management: Develops command and control mechanism for remote use of Electronic Attack (EA) assets to include frequency, antenna alignment and weapon firing data transfer. Develops a modeling and simulation laboratory for the program office to use in the development, intended effect, and risk reduction of new EA capabilities.											
IO Counter Measure (CM) Capability Research and Development. Develops software to account for antenna modeling, weather calculations, radio frequency modeling, signals mapping and terrain modeling for warfighter use in configuring optimal EA from afloat.											
Maritime Cryptologic Systems for the 21st Century (MCS-21) Systems Development and Support: Develops and fields spiral EA capabilities against Fleet Forces Command prioritized signals and target sets. EA capabilities will be integrated into a software architecture baseline that is deployed on subsurface, airborne and surface IO platforms (Classic Troll, Banshee and SSEE-Inc E/ F.) Also included is the Navy's investment in Integrated Communications and Data System (ICADS) proof of concept system.											
Research, Analysis and Research and Development Technical Support: Conducts vulnerability analysis and reverse engineering on emerging threats and targets and provides specialized technical, engineering and management support to the program management office. (Specific details held at a higher classification level.)											
Computer Network Operations (CNO): Funds development and testing of adversary target networks for modeling, simulation, and tailoring of CNO capabilities. Develops specific CNO capabilities to be used against adversary networks. Supports Electronic Target Folder database which provides a means of sharing and storing common CNO data. Studies unique adversary CNO vulnerabilities for exploitation. (Specific development details held at a higher classification level.)											
Increasing emphasis on Ballistic Missile Defense/High Value Units and Red Flash will provide additional and/or enhanced IO capabilities to enable operations plans and support major combat operations scenarios. This effort leverages and continues the development of CNO capabilities and also provides for the delivery of two MCS21 mobile/ground components. (Specific development and capability details are held at a higher classification level.)											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2010	FY 2011	FY 2012	
Title: Information Warfare System/IO Mission Management								3.797	3.869	1.297	
								Articles: 0	0	0	

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>			<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<p><b>Description:</b> IO Mission Management: Develops command and control mechanism for remote use of EA assets to include frequency, antenna alignment and weapon firing data transfer. Develops a modeling and simulation laboratory for the program office to use in the development, intended effect, and risk reduction of new EA capabilities.</p> <p><b>FY 2010 Accomplishments:</b> Continued the following programs task requirements: Radio Frequency (RF) Propagation Modeling Mission Planning Optimization &amp; Tasking Services (MPOTS) Contractor Engineering Support</p> <p><b>FY 2011 Plans:</b> Continue the following programs task requirements: RF Propagation Modeling MPOTS Contractor Engineering Support</p> <p><b>FY 2012 Plans:</b> Continue the following programs task requirements: RF Propagation Modeling MPOTS</p>					
<p><b>Title:</b> Electronic Warfare/Information Operation Counter Measure Capability Research &amp; Development</p> <p><b>Description:</b> Information Operations (IO) Counter Measure (CM) Capability Research &amp; Development. Develops and test IO Countermeasure capabilities across various platforms. Develops specific waveforms to attack adversary systems. Develops and uses modeling and simulation techniques to prototype and test emergent waveforms.</p> <p><b>FY 2010 Accomplishments:</b> Continued: Modeling &amp; Simulation Lab (Applied/projected level of effort) Information Warfare (IW)/IO Electronic Attack (EA) capability development (Details held at higher classification level) Waveform Weapon Development</p> <p><b>FY 2011 Plans:</b> Continue:</p>			5.441 0	7.650 0	3.481 0

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Navy		<b>DATE:</b> February 2011	
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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2010</b>	<b>FY 2011</b>
Modeling & Simulation Lab (Applied/projected level of effort) IW/IO EA capability development (Details held at higher classification level) Waveform Weapon Development  <b>FY 2012 Plans:</b> Continue: Information Warfare (IW)/Information Operations (IO) Electronic Attack (EA) capability development (Details held at higher classification level) Waveform Weapon Development			
<b>Title:</b> Electronic Warfare Readiness Support/MCS-21 Systems Development & Support  <b>Description:</b> Maritime Cryptologic Systems for the 21st Century (MCS-21) Systems Development & Support: Develops and fields spiral EA capabilities against Fleet Forces Command prioritized signals and target sets. EA capabilities will be integrated into a software architecture baseline that is deployed on subsurface, airborne and surface IO platforms (Classic Troll, Banshee and Ships Signal Exploitation Equipment Increment E and Increment F(SSEE-Inc E/F.) Also included is the Navy's investment in Integrated Communications and Data System (ICADS) proof of concept system.  <b>FY 2010 Accomplishments:</b> Continued: EA Systems Development (Details held at higher classification level) EA antenna development - Spiral capability upgrade of Photonics antenna IW/IO EA capability development & integration (Details held at higher classification level) Contractor Systems Engineering & operations (OPS) Development Support Testing  <b>FY 2011 Plans:</b> Continue: EA Systems Development (Details held at higher classification level) EA antenna development - Spiral capability upgrade of Photonics antenna IW/IO EA capability development & integration (Details held at higher classification level) Contractor Systems Engineering & OPS Development Support Testing  <b>FY 2012 Plans:</b>		10.507 0	15.219 0
		<b>Articles:</b>	4.708 0

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2010</b>	<b>FY 2011</b>
Continue: EA Systems Development (Details held at higher classification level) EA antenna development - Spiral capability upgrade of Photonics antenna IW/IO EA capability development & integration. Reduced development efforts due to budget reductions. (Details held at higher classification level) Contractor Systems Engineering & OPS Development Support.			
<b>Title:</b> Electronic Warfare/ Research, Analysis & R&D Technical Support  <b>Articles:</b>  <b>Description:</b> Research, Analysis and Research and Development (R&D) Technical Support. Conducts vulnerability analysis and reverse engineering on emerging threats and targets and provides specialized technical, engineering and management support to the program management office. (Specific details held at a higher classification level.)  <b>FY 2010 Accomplishments:</b> Continued: Technical and intelligence related studies and contractor engineering, technical and management support Navy Information Operations (IO) Architecture process development Research and Analysis (Details held at higher classification level)  <b>FY 2011 Plans:</b> Continue: Technical and intelligence related studies and contractor engineering, technical and management support Research and Analysis (Details held at higher classification level)  <b>FY 2012 Plans:</b> Continue: Technical and intelligence related studies and contractor engineering, technical and management support Research and Analysis (Details held at higher classification level)		6.658 0	6.829 0
<b>Title:</b> Electronic Warfare/ Computer Network Operations (CNO)  <b>Articles:</b>  <b>Description:</b> Computer Network Operations (CNO): Funds development and testing of adversary target networks for modeling, simulation, and tailoring of CNO capabilities. Develops specific CNO capabilities to be used against adversary networks. Supports		7.864 0	5.831 0
		3.892 0	

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Navy							<b>DATE:</b> February 2011				
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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>											
							<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>		
Electronic Target Folder database which provides a means of sharing and storing common CNO data. Studies unique adversary CNO vulnerabilities for exploitation. (Specific development details held at a higher classification level.)  <b>FY 2010 Accomplishments:</b> Continued: CNO R&D Integrated Testing Facility Computer Network Attack Capabilities Development (Details held at higher classification level) Demonstration of Advanced Computer Network Operations Concept (Details held at higher classification level)  <b>FY 2011 Plans:</b> Continue: CNO R&D Integrated Testing Facility Computer Network Attack Capabilities Development (Details held at higher classification level) Demonstration of Advanced Computer Network Operations Concept (Details held at higher classification level)  <b>FY 2012 Plans:</b> Continue: CNO Research and Development Integrated Testing Facility Computer Network Attack Capabilities Development (Details held at higher classification level) Demonstration of Advanced Computer Network Operations Concept (Details held at higher classification level)											
							<b>Accomplishments/Planned Programs Subtotals</b>				
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• RDTEN/0604270N/1742: <i>Electronic Warfare Technical Development</i>	4.106	4.799	1.784	0.000	1.784	1.702	1.649	1.552	1.542	0.000	17.134
<b>D. Acquisition Strategy</b> These programs are designated non-ACAT and operate under streamlined acquisition. This designation supports a streamlined acquisition process using the Advanced Concept Technology Demonstration (ACTD) documentation of the Defense Acquisition Guidance.											

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<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0204575N: <i>Elect Warfare Readiness Supt</i>	<b>PROJECT</b> 2263: <i>Information Warfare System</i>

**E. Performance Metrics**

The Navy Offensive Cyber and Information Warfare Program (NOCIWP) discovers adversary vulnerabilities, develops capabilities to exploit these vulnerabilities, and transitions these capabilities for operational use. Investments are made in high risk/high payoff non kinetic opportunities and result in technologies and capabilities that provide unique, innovative, life-saving, and potentially cost saving applications into Department of Navy and Department of Defense classified acquisition and intelligence programs. Measures include quality and impact of new ideas and approaches, the success of the technology application in satisfying COCOM and Fleet requirements, and successful cost effective transition of the capability into operational systems. The goal of these investments is to provide to Commanders non kinetic options to influence adversaries and prevent escalation of crises. Due to the nature and classification of these efforts qualitative measures are used. It is the intent through the development of modeling and simulation scenarios and capabilities to develop quantitative metrics. The success of this depends heavily on the insight obtained via various intelligence community efforts.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy											DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0204575N: Elect Warfare Readiness Supt					PROJECT 2263: Information Warfare System				
Product Development (\$ in Millions)					FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Primary Hardware Development	Various	Classified:Various	17.528	3.200	Oct 2010	0.700	Oct 2011	-		0.700	Continuing	Continuing	Continuing	
Ancillary Hardware Development	Various	Classified:Various	11.250	1.125	Oct 2010	-		-		-	0.000	12.375		
Systems Engineering	SS/CPFF	Applied Research Laboratory:University Park, PA	0.700	0.370	Nov 2010	0.395	Nov 2011	-		0.395	Continuing	Continuing	Continuing	
Systems Engineering	SS/CPFF	ARGON:Fairfax, VA	3.420	0.445	Nov 2010	0.225	Nov 2011	-		0.225	Continuing	Continuing	Continuing	
Systems Engineering	WR	NRL:Washington, DC	2.610	0.785	Nov 2010	0.425	Oct 2011	-		0.425	Continuing	Continuing	Continuing	
Subtotal			35.508	5.925		1.745		-		1.745				
Support (\$ in Millions)					FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Development Support	SS/CPFF	ARGON:Fairfax, VA	9.828	1.600	Oct 2010	0.853	Oct 2011	-		0.853	Continuing	Continuing	Continuing	
Software Development	SS/CPFF	L3 Communications:New York, NY	62.777	1.905	Dec 2010	1.271	Dec 2011	-		1.271	Continuing	Continuing	Continuing	
Development Support	WR	NRL:Washington, DC	0.510	0.550	Nov 2010	0.550	Nov 2011	-		0.550	0.000	1.610		
Development Support	Various	Classified:Classified	4.444	5.448	Nov 2010	1.400	Nov 2011	-		1.400	0.000	11.292		
Software Development	SS/CPFF	ARL:University Park, PA	2.000	1.100	Nov 2010	0.325	Nov 2011	-		0.325	0.000	3.425		
Software Development	SS/CPFF	ARGON:Fairfax, VA	7.089	7.869	Nov 2010	2.100	Nov 2011	-		2.100	0.000	17.058		
Software Development	WR	NRL:Washington, DC	1.270	0.675	Oct 2010	0.350	Oct 2011	-		0.350	0.000	2.295		
Software Development	Various	Classified:Classified	13.434	7.831	Oct 2010	3.748	Oct 2011	-		3.748	0.000	25.013		
Research, Studies and Vulnerability	WR	NRL:Washington, DC	10.236	2.978	Oct 2010	2.443	Oct 2011	-		2.443	0.000	15.657		
Subtotal			111.588	29.956		13.040		-		13.040				

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy										DATE: February 2011			
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Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NAWC:China Lake, CA	4.825	0.577	Nov 2010	0.367	Dec 2011	-		0.367	Continuing	Continuing	Continuing
Subtotal			4.825	0.577		0.367		-		0.367			
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering and Program Management Support	Various	Classified:Classified	3.856	1.265	Oct 2010	1.320	Nov 2011	-		1.320	Continuing	Continuing	Continuing
Acquisition Workforce Fund 2009	Various	Various:Various	0.117	-		-		-		-	Continuing	Continuing	Continuing
PMO Mgmt Spt	Various	Classified:Various	-	1.675	Oct 2010	1.670	Oct 2011	-		1.670	0.000	3.345	
Subtotal			3.973	2.940		2.990		-		2.990			
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			155.894	39.398		18.142		-		18.142			
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0204575N: <i>Elect Warfare Readiness Supt</i>	PROJECT 2263: <i>Information Warfare System</i>

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Navy			<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0204575N: <i>Elect Warfare Readiness Supt</i>	<b>PROJECT</b> 2263: <i>Information Warfare System</i>	

**Schedule Details**

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 2263</b>				
IO Mission Management: MCS21 Planning, Optimization, and Tasking Services (MPOTS): MCS21 Planning, Optimization, and Tasking Services (MPOTS)	1	2011	1	2011
IO Mission Management: IMPACTS: IMPACTS (Spiral Enhancement) #2	3	2011	3	2011
IO Mission Management: IMPACTS: IMPACTS (Spiral Enhancement) #3	3	2012	3	2012
IO Mission Management: IMPACTS: IMPACTS (Spiral Enhancement) #4	3	2013	3	2013
IO Mission Management: IMPACTS: IMPACTS (Spiral Enhancement) #5	3	2014	3	2014
IO Mission Management: IMPACTS: IMPACTS (Spiral Enhancement) #6	3	2015	3	2015
IO Mission Management: IMPACTS: IMPACTS (Spiral Enhancement) #7	3	2016	3	2016
IO CM Capability Research & Development: Modeling and Simulation Lab: Modeling and Simulation Lab	1	2011	1	2011
IO CM Capability Research & Development: Waveform Development: FIOC Delivery #1	1	2011	1	2011
IO CM Capability Research & Development: Waveform Development: FIOC Delivery #2	3	2012	3	2012
IO CM Capability Research & Development: Waveform Development: FIOC Delivery #3	2	2014	2	2014
IO CM Capability Research & Development: Waveform Development: FIOC Delivery #4	3	2015	3	2015
Computer Network Operations: A/CNA: A/CNA	1	2010	1	2010
Computer Network Operations: CNO Capabilities Development: CNO Capabilities Development Studies/Demonstration	1	2010	1	2010
Computer Network Operations: CNO Capabilities Development: CNO Spiral Enhancements #1	2	2010	2	2010

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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Computer Network Operations: CNO Capabilities Development: CNO Spiral Enhancements #2	2	2011	2	2011
Computer Network Operations: CNO Capabilities Development: CNO Spiral Enhancements #3	4	2012	4	2012
Computer Network Operations: CNO Capabilities Development: CNO Spiral Enhancements #4	4	2013	4	2013
Computer Network Operations: CNO Capabilities Development: CNO Spiral Enhancements #5	2	2015	2	2015
Test and Evaluation Milestones: DT Airborne IO Capabilities/MCS21 IO Capabilities: MCS21 IO Capabilities (Test) #2	4	2011	4	2011
Test and Evaluation Milestones: DT Airborne IO Capabilities/MCS21 IO Capabilities: MCS21 IO Capabilities (Test) #3	1	2012	1	2012
Test and Evaluation Milestones: DT Airborne IO Capabilities/MCS21 IO Capabilities: MCS21 IO Capabilities (Test) #4	3	2013	3	2013
Test and Evaluation Milestones: DT Airborne IO Capabilities/MCS21 IO Capabilities: MCS21 IO Capabilities (Test) #5	4	2014	4	2014
Test and Evaluation Milestones: DT Airborne IO Capabilities/MCS21 IO Capabilities: MCS21 IO Capabilities (Test) #6	1	2015	1	2015
Test and Evaluation Milestones: DT Airborne IO Capabilities/MCS21 IO Capabilities: CNO Spiral Enhancements #6	3	2016	3	2016
Test and Evaluation Milestones: DT Airborne IO Capabilities/MCS21 IO Capabilities: A/CNA Study/Demonstration	2	2011	2	2011

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